

1. A method for reproducing from a storage medium, one of a plurality of video programs at a plurality of reproducing speeds wherein selection of ones of said plurality of speeds are linked at predetermined jump points, said method comprising the

5 steps of:

a) selecting (step 200) one of said plurality of video programs for reproduction;

b) selecting (step 225) a reproduction speed for said one of said plurality of video programs (P1, P2, Pn);

10 c) selecting (step 225) a digitally encoded signal from a set of signals corresponding to said one of said plurality of video programs (P1, P2, Pn), responsive to said reproduction speed;

d) reproducing (step 275) said digitally encoded signal from said set of signals;

15 e) jumping (step 600) to different ones of said encoded set of signals for said reproducing in accordance with said predetermined jump points, in response to subsequent selections of different reproduction speeds;

20 f) decoding (510) said reproduced signals for display (1000) of said selected program (P1, P2, Pn) at said selected reproduction speeds; and,

wherein said step c) further comprises selecting said digitally encoded signal from said set of digitally encoded signals corresponding to different speeds of reproduction with differing
25 resolution values.

2. The method of claim 1, comprising the step of arranging said jump points in a nested pattern (120).

30 3. The method of claim 1, comprising the step of generating one signal (NP) of said digitally encoded set (NP, TP1, -TP1, TP2, -TP2) of signals for reproduction at a normal play speed.

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4. The method of claim 3, comprising the step of generating the other ones (TP1, -TP1, TP2, -TP2) of said set for reproduction at speeds other than said normal play speed.

5 ~~5~~ 6. The method of claim 4, comprising the step of generating said other ones (TP1, -TP1, TP2, -TP2) of said set for reproduction with a bit rate less than a bit rate of said one signal for reproduction at said normal play speed.

10 ~~6~~ 7. The method of claim 1, comprising the step of assembling said jump points as look up tables (120).

15 ~~1~~ 8. The method of claim 7, comprising the step of arranging said look up tables in groups (NPG, TP1G, -TP1G, TP2G, -TP2G) where each one of said groups of said look up tables is specific to a reproduction speed.

20 ~~8~~ 9. An apparatus for reproducing video programs, comprising:
means (100, 101, (99+n)) for storing a plurality of video program records (P1, P2, Pn), wherein each program record having a set of digitally encoded signal records (NP, TP1, -TP1, TP2, -TP2);

25 means for linking (120) each of said encoded signal records (NP, TP1, -TP1, TP2, -TP2) in each of said sets to one another at predetermined jump points for selecting between said digitally encoded signal records (NP, TP1, -TP1, TP2, -TP2); and
wherein each said set of digitally encoded signal records (NP, TP1, -TP1, TP2, -TP2) having records of differing
30 sizes for reproduction at a plurality of speeds.

35 ~~9~~ 10. The apparatus of claim 9, wherein said predetermined jump points are grouped (NPG, TP1G, -TP1G, TP2G, -TP2G) specific to transitions between differing reproduction speeds.

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10 11. The apparatus of claim 9, wherein said predetermined jump points represent addresses of digital images which substantially correspond with one another in said encoded signals (NP, TP1, -TP1, TP2, -TP2) in each of said sets.

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11 12. The apparatus of claim 9, wherein said linking means comprises tables (120) of said predetermined jump points.

12 13. The apparatus of claim 12, wherein said linking means comprises N sets of tables (120), each set comprises (N - 1) tables of said predetermined jump points for each of N reproduction speeds.

13 15. The apparatus of claim 9, wherein a record for reproduction at a normal play speed (NP) represents a largest byte record.

14 16. The apparatus of claim 9, wherein records (TP1, -TP1, TP2, -TP2) for reproduction at speeds other than a normal play speed represent records smaller than said normal play speed record (NP) and have sizes which decrease in proportion to reproduction speed increase.

15 20. The apparatus of claim 21, wherein said images are reproduced from a time which precedes the preceding version.

16 21. An apparatus for reproduction of compressed digital images at a plurality of speeds, said apparatus comprising:
storage device (10) having stored therein compressed
30 program records (P1, P2, Pn), and tables (120) of predetermined addresses for use at different play speeds;
transducing means (51) for reproducing images from said compressed program records (P1, P2, Pn); and,
control means (50) responsive to a user program and
35 play speed selection for selecting said program records (P1, P2, Pn), and additionally responsive to user determined play speed

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for reading said tables (120) and generating predetermined addresses within said selected program records (P1, P2, Pn) for locating said transducing means (S1) such that images are reproduced from said program records (P1, P2, Pn) at said user 5 determined play speed.

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